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1. no inherent speed limitation below approximately 1600 wpm).. The [redacted] differs basically from the [redacted] in the electronic method of selection for storage and in the variety of operational functions that will be included in the prototype. The objective of the [redacted] is to provide comparative information on the reliability of the two basic circuit approaches and the over-all complexity and package size attainable in the two units. The description above pertains specifically to the [redacted]

covered by requiring positive and conscious action on the part of the operator to erase. On the other hand, a means is provided to permit instantaneous erasure at any time at the desire of the operator. Switches and the "fold-away" battery doors are the only moving parts in the keyers. Memories consist of ferrite aperture plates using coincident current selection in the [redacted] and flux-limited selection in the [redacted] and as such are not subject to aging or deterioration through use. A 12 digit readout device, the development of which is nearing completion, can be packaged with the keyer (within the dimensions stated below) to permit readout and check of a stored numerical message. Lighted number buttons will monitor the readout. It now appears feasible also to use this type keyer, in conjunction with a receiver and adapter to receive and store "off-the-air" transmissions for later readout at leisure. Speed of reception can be up to 1600 wpm and is contingent only upon the capability of associated equipment and techniques. (The keyer has

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output 60 wpm (can be made optional up to 1600 wpm)  
xxxxxxxx Baudot Code (Lengthened stop pulse) Parallel output and staggered parallel output available but is not brought out to terminals.  
NA

XXXXXXXXXXXXXXXXXXXX Adapters for direct CW or FRK keying of RT-6 or RT-6A.

XXXXXXXXXXXXXXXXXXXX

Semiconductor 4 to 6 volts DC at 120 - 160 MA (4-"D" cells or compatible rechargeable NiCads)  
XXXXX 90 transistors - 64 diodes - 3 stabistors - 3 zener references.

Temperature range: -30°C to +50°C (tentative)  
Code Unit width Stability:  $\pm 4\%$  oven temperature range.  
NA

NA

1 1/4" X 3 7/8" X 7 3/4"

This document is not to be interpreted  
file. It represents a preliminary design and must be  
subjected to individual systematic review.

Approx. 20 oz.





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Hand carry.

Insert batteries and connect transmitter.



Very limited amount of training required. Can probably be operated after few practice sessions with written instructions.

Battery replacement or recharge.

Temperature limits as specified. For use with  or low power agent transmitter  now under development.

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Protect from severe shock, continuous vibration and excessive moisture.

The off-line electronic keyer program was initiated with a feasibility study in April of 1959. The study indicated the possibility of accomplishing the keyer requirement with either of two fundamentally different circuits. Since little first hand knowledge could be brought to bear on the problems to be faced in keyer applications of either circuit, it was decided to undertake the simultaneous development of both for informative and comparative reasons. Initial testing of a 40 group engineering ~~xxxx~~ breadboard was achieved over the desired temperature range in July. With eventual circuit success appearing positive assured as a result of the tests it was then deemed safe and even advisable to expand the capacity to 120 groups. Since that time the backspace and numerical readout functions were added. An engineering prototype suitable for functional and operational evaluation is expected to be ready for delivery in January of 1961. Packaging of the engineering prototype of the  version has not yet been started and delivery of this unit cannot be expected before about May of 1961. The capacity of the  also has been expanded.

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At this time firm plans exist only insofar as the completion of prototypes now under construction is concerned. The extent of future activity will be contingent upon the results of operational evaluation of the prototypes.

No photographs - Packaging is not complete.

NONE

Unclassified.